

CLAIMS

1. An artificial corundum crystal containing a seed crystal and having at least one crystal face selected from the group consisting of a {113} face, a {012} face, a {104} face, a {110} face, a {101} face, a {116} face, a {211} face, a {122} face, a {214} face, a {100} face, a {125} face, a {223} face, a {131} face, and a {312} face.
2. An artificial corundum crystal containing a seed crystal and having a dominant crystal face other than a {001} face.
3. The artificial corundum crystal according to claim 1 or 2, characterized in that the artificial corundum crystal is derived from a crystal having a hexagonally dipyramidal shape.
4. The artificial corundum crystal according to any one of claims 1 to 3, characterized in that a chromium is added as a coloring component.
5. A process for producing an artificial corundum crystal, characterized in that an artificial corundum crystal having a hexagonally dipyramidal shape as its base shape is formed with a seed crystal by a flux evaporation method of heating a sample containing a raw material and a flux to precipitate a crystal and grow the crystal by

use of flux evaporation as driving force.

6. The process for producing an artificial corundum crystal according to claim 5, characterized in that the flux contains a molybdenum compound.

7. The process for producing an artificial corundum crystal according to claim 6, characterized in that the molybdenum compound is a molybdenum oxide, or a compound which is heated to generate the molybdenum oxide.

8. The process for producing an artificial corundum crystal according to claim 6 or 7, characterized in that the flux contains an evaporation inhibitor.

9. The process for producing an artificial corundum crystal according to claim 8, characterized in that the evaporation inhibitor is an alkali metal compound.

10. The process for producing an artificial corundum crystal according to claim 9, characterized in that the alkali metal compound is an alkali metal oxide, or a compound which is heated to generate the alkali metal oxide.

11. The process for producing an artificial corundum crystal according to claim 10, characterized in that a mol number of an alkali metal atom in the alkali metal compound

is 40% or less by mol of a total mol number of the sample.

12. The process for producing an artificial corundum crystal according to anyone of claims 5 to 11, characterized in that a mol number of the raw material is 10% or less by mol of the total mol number of the sample.

13. The process for producing an artificial corundum crystal according to anyone of claims 5 to 12, characterized in that the seed crystal is a corundum crystal.

14. The process for producing an artificial corundum crystal according to anyone of claims 5 to 13, characterized in that the raw material contains a chromium compound.